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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/274,953	03/23/1999	ITZIK BEN-BASSAT	3055.00068	9162

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BANNER & WITCOFF
1001 G STREET N W
SUITE 1100
WASHINGTON, DC 20001

EXAMINER

HUYNH, SON P

ART UNIT	PAPER NUMBER
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2623

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/28/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/274,953

Applicant(s)

BEN-BASSAT ET AL.

Examiner

Son P. Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4, 7-9 and 24-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4, 7-9 and 24-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/22/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/22/2006 has been entered.

Response to Arguments

2. Applicant's arguments with respect to amended claims 2-4, 7-9, 24-29 have been considered but are moot in view of the new ground(s) of rejection.

Claims 5-6, 10-23, and 30 have been cancelled.

In response to Applicant's arguments that there is no teaching or suggestion in Bukhari that the system could operate without the modem....there is no teaching in either Naiff or Bukhari of using a DC source external to the card that powers the VSAT through a connector on the card. Moreover, there is no teaching or suggestion that work is

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functional for a modem can be simply applied to a peripheral card (page 5, line 5-page 6, line 2), the Examiner notes that amended claim 24 does not recite the system operates without the modem, work is functional for a modem can be simply applied to a peripheral card, using a DC source external to the card that powers the VSAT through a connector on the card. Instead, amended claim 24 recites "a connector, connecting the card to a DC source external to the card wherein the DC source powers the VSAT".

This limitation could be interpreted as a DC source powers the VSAT and coupled to the connector in either series connection or parallel connection (without power the VSAT through the connector).

Rejections on claims 2-4,7-9,24-29 are analyzed as discussed below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 24, 7, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naiff (US 5,982,363) in view of Gillaspie (US 4,777,657) and Bukhari (US 6,763,222).

Regarding claim 24, Naiff teaches a card (40 –figure 3) for communicating to and from a personal computer (20-figure 4) to external network, comprising:

a circuit board which plugs into the personal computer and which is coupled to exchange data via an industry-standard bus (PCI) in the personal computer (circuit board of card 40 - see figure 3);

radio frequency modulator circuitry on the circuit board, which receives the data and transmits radio frequency signals responsive thereto (television interface (card 40) includes means for modulating the television signals on a carrier for output to the television appliance on a standard television channel frequency – col. 2, line 66-col. 3, line 5; the card 40 receives data from television service provider, processes and transmits the television signal to television via transceiver on the card and simple antenna. The card further receives data from user and transmits the data to the television service provider via coaxial cable 16 in RF return path (col. 6, lines 29-32; which connected to a satellite receiver (figures 3-4; col. 5, line 10 – col. 6, line 37, figure 4). Inherently, the satellite receiver must includes a transmitter for transmitting data in RF return path from the card to an earth orbiting satellite so that the data in RF return path is received by television service provider via the satellite.

Naiff also discloses the television interface peripheral card using resource already present in the PC. These resources include the CPU, memory, power supply, hard drive and associated components of the PC (col. 5, lines 42-46). Thus, the card must comprises a connector connecting the card to the power supply external to the

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card (power supply of the PC) so that the card uses the power supply source from the PC. However, Naiff does not explicitly disclose the power supply of the PC connected to connector of the card is a DC source to power the external network, wherein the external network is communicated through a very small aperture terminal (VSAT), and the VSAT comprises an upconverter and a power amplifier for transmitting data to an earth-orbiting satellite.

Gillaspie discloses an add-on receiver board has an input/output connector which removably plugs into a backplane port of a computer. The add-on receiver board can receive and transmit data to the computer's bus. The add-on receiver board's input port is d.c coupled to the computer's d.c power supply so that the computer's d.c power supply can be used to provide power to apparatus external to the computer system- such as a satellite dish's feed horn (col. 2, lines 45-64, col. 5, lines 7-20). Thus, Gillaspie discloses the card comprises a connector (interpreted as add-on receiver board comprise d.c input port coupled to the computer d.c power supply), connecting the card to a DC source external to the card wherein the DC source powers the external network includes satellite antenna, television antenna. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Naiff to use the teaching of a d.c. source connected to the connector of the card and powers the external network as taught by Gillaspie in order to minimize the risk and reduce power loss on transmission medium. However, Naiff in view of Gillaspie does not explicitly disclose the external network is communicated through a very small

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aperture terminal (VSAT), and the VSAT comprises an upconverter and a power amplifier for transmitting data to an earth-orbiting satellite

Bukhari, in analogous art, discloses IDU has a connector, which a DC source from IDU (24) powers external network, which is VSAT communications outdoor unit for satellite communication – col. 1, lines 6-22; col. 2, lines 14-35; col. 3, lines 42-48), wherein the VSAT (ODU and the dish) comprising an upconverter (frequency multiplier circuit 34) and a power amplifier (36) for transmitting data to an earth orbiting satellite (figure 2, col. 3, line 50-col. 4, line 8). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Naiff in view of Gillaspie to use the teaching as taught by Bukhari in order to reduce power consumption; and furthermore, to reduce the cost of the external network.

Regarding claim 7, Naiff in view of Gillaspie and Bukhari teaches a card as discussed in the rejection of claim 24. Naiff further discloses the application software in the PC controls the various functions of the television interface card 40, including generation of electronic program displays from data provided by the television system operator. Naiff does not explicitly disclose modulating the transmitted signal according to a predefined protocol in accordance with the command. Official Notice is taken that modulating signal to a predefined protocol for transmission is well known in the art. For example, modulate the signal according to protocol, format suitable for transmission over a communication medium or suitable to display on particular device. Therefore, it would have been obvious to one of ordinary skill in the art to modify Naiff in view of Gillaspie and Bukhari

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to use the well-known teaching in the art of modulating signal according to a predefined protocol in order to improve efficiency in data processing.

Regarding claim 26, the limitations that correspond to the limitations as claimed in claim 24 are analyzed as discussed in the rejection 24. Naiff further discloses the card further receives data from user and transmits the data to the television service provider via coaxial cable 16 in RF return path (col. 6, lines 29-32; which connected to a satellite receiver (figures 3-4; col. 5, line 10 – col. 6, line 37, figure 4). Thus, the circuit board must includes a transmitter card for transmitting data in RF return path from the card to an earth orbiting satellite so that the data in RF return path is received by television service provider via the satellite.

5. Claims 2-4, 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naiff (US 5,982,363) in view of Gillaspie (US 4,777,657) and Bukhari (US 6,763,222) as applied to claim 24, 26, and further in view of Thompson et al. (US 5,644,354).

Regarding claim 2, Naiff in view of Gillaspie and Bukhari teaches a method as discussed in the rejection of claim 24. Naiff further discloses the peripheral card comprises components such as a tuner with associated television signal processing circuit which tunes to requested channel based on the signal input from the remote control, the selected channel is accessed by access control circuitry; audio/video

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decompression circuitry; video and audio multiplexers; upconverter for outputting RF signal to user's television (see col. 5, lines 49-60). In addition, Naiff discloses the telephone return port 64 of peripheral card 40 communicates to service provider using RF return path (see col. 8, lines 6-13) and peripheral card 40 communicates to the television using RF signal transmission (see col. 9, lines 19-42). Naiff does not explicitly disclose modulation circuit comprises a frequency synthesizer generating radio frequency signal.

Thompson discloses modulation circuit comprises a RF frequency synthesizer 41 for generating radio frequency signal (see include, but is not limited to, figures 4-5, col. 5, lines 56-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Naiff in view of Gillaspie and Bukhari with the teaching of modulation circuit comprises synthesizer as taught by Thompson in order to improve efficiency in data transmission.

Regarding claim 3, Naiff in view of Gillaspie, Bukhari and Thompson teaches a method as discussed in the rejection of claim 2. Thompson further disclose microprocessor 23 of the modulator card manipulates the transferred data, microprocessor feeds data to a dynamic gate array 29 into the appropriate sequencing configuration. The dynamic gate array 29 feeds the formatted data to a transmission modulator 33 which consists of an RF synthesizer 41 which received the formatted data from the dynamic gate array 29, and stabilized by a reference oscillator, controls a voltage control oscillator whose output drives an RF amplifier (see col. 5, lines 21-65). Thus, the frequency generated by

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the frequency synthesizer (41) is set by a controller (microprocessor 23) on the circuit board (card modulator 20) (via dynamic gate array 29).

Regarding claim 4, Naiff in view of Gillaspie, Bukhari and Thompson teaches a method as discussed in the rejection of claim 2. Naiff further discloses the application software control various functions of the television interface card 40 via bus controller 86 (see col. 6, lines 57-63 and figure 3). It is obvious that the frequency generated by the frequency synthesizer is set by conveying instructions via the computer bus in order to allow the user to remotely control the output content, thereby improve convenience to user.

Regarding claims 27-29, the additional limitations as claimed correspond to the additional limitations as claimed in claims 2-4, respectively, and are analyzed as discussed with respect to the rejections of claims 2-4.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naiff (US 5,982,363) in view of Gillaspie (US 4,777,657) and Bukhari (US 6,763,222) as applied to claim 24, and further in view of Bock et al. (US 5,953,418).

Regarding claim 8, Naiff in view of Gillaspie and Bukhari teaches a card as discussed in the rejection of claim 24. However, Naiff in view of Gillaspie and Bukhari does not explicitly disclose the modulation circuitry comprises an encoder, which encodes error

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correction into the transmitted signals according to a predetermined protocol in accordance with a command conveyed to the card via the industry standard bus.

Bock et al. discloses signal processor 68 in transmitter card 62 comprises encoder (error correction 92) that encodes error correction into the transmitted signals (see figure 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Naiff in view of Gillaspie and Bukhari to use the teaching as taught by Block in order to allow the receiver to correct transmission errors.

7. Claims 9 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naiff (US 5,982,363) in view of Gillaspie (US 4,777,657) and Bukhari (US 6,763,222), and further in view of Goldman et al. (US 5,592,366).

Regarding claim 9, Naiff in view of Gillaspie and Bukhari teaches a card as discussed in the rejection of claim 24. However, Naiff in view of Gillaspie and Bukhari does not explicitly disclose the card is coupled to at least one other card located in the computer such that signals pass between the cards without passing through the industry standard bus.

Goldman et al. discloses the card comprises an auxiliary connector through which the card is coupled to at least one other card located in the computer such that signals pass between the cards without passing through the industry standard bus (see col. 4, lines

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51-57). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Naiff in view of Gillaspie and Bukhari to use the teaching as taught by Goldman et al. in order to update the system easily, and furthermore, to allow the card communicates directly to the other cards thereby increase efficiency of the system.

Regarding claim 25, the limitations that correspond to the limitation of claim 26 and are analyzed as discussed with respect to the rejection of claim 26. However, Naiff in view of Gillaspie and Bukhari does not explicitly disclose a transmitter card and receiver card, wherein an auxiliary bus connecting between the transmitter card and receiver card.

Goldman et al. discloses transmitter card and receiver card, wherein the transmitter card and receiver card is connected by a cable (see col. 4, lines 51-57) reads on transmitter card and receiver card is connected by an auxiliary bus. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Naiff in view of Gillaspie and Bukhari to use the teaching as taught by Goldman et al. in order to update the system easily, and furthermore, to allow the card communicates directly to each other thereby increase efficiency of the system

Conclusion

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8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Haugli et al. (US 5,991,279) discloses wireless packet data distributed communication system.

Tanabe (US 5,640,673) discloses broadcast satellite communication system with improved answer signal transmission.

Randall et al. (US 6,415,439) discloses protocol for wireless control system.

Flowers et al. (US 6,246,873) discloses satellite communication conference system for use in a satellite communication system.

Ichiyanagi et al. (US 5,809,420) discloses transmission power control apparatus.

Meirzon et al. (US 6,934,512) discloses switching VSAT transmitter.

Dillon et al. (US 6,131,160) discloses method and apparatus for an adapter card providing conditional access in a communication system.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son P. Huynh whose telephone number is 571-272-7295. The examiner can normally be reached on 9:00 - 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Son P. Huynh

December 20, 2006

A handwritten signature in black ink, appearing to be 'Son P. Huynh', with a stylized flourish at the end.